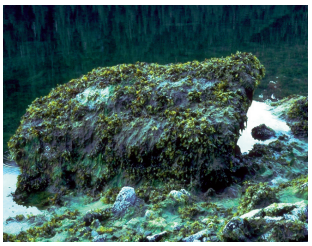
Educational Resources: Oil Spills and Hazardous Chemical Accidents

Looking for your students to learn more about oil spills or hazardous chemical accidents? The Office of Response and Restoration (OR&R) Website has a section specifically for students and teachers which provides valuable information on the following topics.

The Basics

The story on oil spills—general information about oil spills and how they happen.

Guided tours—see how scientists and other experts respond to oil spills and chemical accidents.



Mearns Rock, Alaska.

Mearns Rock

It isn't easy to determine whether a particular area of shoreline has recovered from oiling during a spill, or how to expect it to look when it has. Mearns Rock was oiled during the 1989 Exxon Valdez spill. Checkout our website for photos of the ever-changing rock, get ideas for class projects, and become familiar with the incident with our background information.

Experiments and Projects

There are experiments and interactive lessons for all ages–go to the website for more information about:

- Oil Floats and Spreads
- Making Mousse
- Cleaning Oiled Feathers
- Oil Spills at the Water Surface
- Mearns Rock Graphing Project
- Sediment Penetration Exercise
- Coral Reef Discovery Kits

Abandoned vessel survey in lagoon

Instructor's Kits

Mapping: An instructor's kit is available for teaching how maps are used to create a protection strategy for a coastline threatened by an oil spill Using the Environmental Sensitivity Index (ESI) maps students identify areas vulnerable to the oil spill and set protection priorities. This project is for middle or high school students, or adults.

Oil Spill Response: The oil spill response kit includes an exercise using our spill tools software to make decisions during an oil spill response. This project can be done with middle or high school students, or adults.

Water Cycle: A lesson plan is available for teachers that instructs students on the real complexity of the water cycle. The lesson plan can be extended to show how pollution moves around in the water, where plants and animals can be exposed, and where pollution is left behind in the water cycle.

Pollution: Crossword puzzles are available that challenges kids' understanding of where pollution comes from and how it can move through a neighborhood watershed.

Help for Report Writers

Check out our Website for:

Information on major oil spills around the world during the last few decades, available in the Historical Incidents database on our Incident News Website.

Values of common pollutants in water, soil, and sediment can be downloaded and used for preliminary, comparative assessments to determine how much risk might be posed by any given level of these pollutants.

A Bioassessment Manual detailing general approaches, plus specific analytical tools, that can be used to address the question of whether an area is significantly contaminated to cause ecological harm.

Information for specific hazardous waste sites across the country, (maybe in your community), plus state summaries, to help provide an evaluation of the risk posed to aquatic natural resources of interest to NOAA.

Our Photo Gallery section includes views of major hazardous waste sites of interest to NOAA, and habitat restoration projects completed at hazardous waste sites. (You can use any of our photos for your report.)

Photo tours with descriptions of how OR&R works with partners to accomplish habitat restoration at hazardous waste sites.

Searchable collection of photos related to oil spills and other hazardous materials topics.

Reports by OR&R marine biologists, describing what they've learned about how well the plants and animals affected by the Exxon Valdez spill are recovering; how impacts of pollution on important species that are eaten by fish can be predicted; a summary of the toxicity of mercury to aquatic animals; and examples of how ecological risk has been determined at various hazardous waste sites.

Answers to questions that people have asked us, along with links to other helpful Websites.

For additional information, visit our website at: **http://response.restoration.noaa.gov** or contact Mike Buchman 206.526.6340 (mike.buchman@noaa.gov).

OR&R outreach contacts: Vicki Loe 206.526.6464 (vicki.loe@noaa.gov) or Erika Olson 301.713.2989 (erika.olson@noaa.gov).

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